

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A powder filling nozzle used for filling up a container with a powder mixed with a gas and in a fluidized state, comprising:

a tubular body having an opening for discharging the powder in the fluidized state into the container; and

a gas separating unit disposed near the opening of the tubular body and allowing the gas delivered together with the powder in the tubular body to pass through the gas separating unit but not allowing the powder to pass through the gas separating unit,

wherein the gas separating unit serves to set the opening in a plugged state by the powder separated from the gas, so that the delivery of the powder from the tubular body into the container is stopped,

wherein the tubular body has a double pipe structure including a first tubular body and a second tubular body, the first tubular body being inserted into the second tubular body so that a gap between the two tubular bodies is formed as a gas delivery path, both ends of the second tubular body being fixed to the first tubular body so as to close the gap, the first tubular body serving as a delivery path which discharges the powder in the fluidized state fed from one opening of the first tubular body into the container through the other opening of the first tubular body, the gas separating unit including a first filter part which does not pass the powder therethrough but allows the gas to pass therethrough, the second tubular body having a gas exhausting port connected with an external gas suction unit, and the second tubular body having a function of discharging the gas, passing through the first filter part and being attracted to the first tubular body by operation of the external gas suction unit, from the gas exhausting port through the gas delivery path, and

wherein the tubular body has a triple pipe structure including a third tubular body in addition to the first and second tubular bodies, the third tubular body having an inner

diameter larger than an outer diameter of the second tubular body, the second tubular body being inserted into the third tubular body so that a gap between the second and third tubular bodies is formed as a second gas delivery path, both ends of the third tubular body being fixed to the second tubular body so as to close the gap between the second and third tubular bodies at both ends thereof, the third tubular body including a second filter part at an outer circumference thereof, the third tubular body having a second gas exhausting port connected with a second external gas suction unit, and the third tubular body having a function of attracting through the second filter part the gas, existing in the powder discharged into the container, by operation of the second gas suction unit, and having a function of discharging the gas, passing through the second delivery path between the second tubular body and the third tubular body, from the second gas exhausting port.

Claims 2-3 (Canceled).

Claim 4 (Previously Presented): The powder filling nozzle of claim 1 wherein the opening of the tubular body is constituted by a through hole which is formed in the first tubular body, and the gas separating unit includes the first filter part which is provided on a circumference of the first tubular body so that the through hole is covered with the filter part.

Claim 5 (Previously Presented): The powder filling nozzle of claim 1 wherein the first tubular body has a lamination structure in which a tubular member of a filter material and a tubular member of a non-filter material are bonded, and the tubular member of the filter material serves as the first filter part.

Claim 6 (Previously Presented): The powder filling nozzle of claim 4 wherein the first filter part is made of a twill-weave filter material.

Claim 7 (Previously Presented): The powder filling nozzle of claim 5 wherein the first filter part includes a laminated member made of two or more filter materials with different meshes.

Claim 8 (Original): The powder filling nozzle of claim 7 wherein the laminated member has a fine-mesh filter material at an inner core portion of the first tubular body.

Claim 9 (Previously Presented): The powder filling nozzle of claim 1 wherein a width of the first filter part is larger than 0.3 times an inner diameter of the opening of the first tubular body.

Claim 10 (Currently Amended): A powder filling device including a hermitically sealed powder fluidization unit and a powder filling nozzle, the powder filling device filling a powder, mixed with a gas and changed to a fluidized state by the powder fluidization unit, into a container through a delivery path by using the powder filling nozzle, the powder filling nozzle comprising:

a tubular body having an opening for discharging the powder in the fluidized state into the container; and

a gas separating unit disposed near the opening of the tubular body and allowing the gas delivered together with the powder in the tubular body to pass through the gas separating unit but not allowing the powder to pass through the gas separating unit,

wherein the gas separating unit serves to set the opening in a plugged state by the powder separated from the gas, so that the delivery of the powder from the tubular body into the container is stopped,

wherein the tubular body has a double pipe structure including a first tubular body and a second tubular body, the first tubular body being inserted into the second tubular body so that a gap between the two tubular bodies is formed as a gas delivery path, both ends of the second tubular body being fixed to the first tubular body so as to close the gap, the first tubular body serving as a delivery path which discharges the powder in the fluidized state fed from one opening of the first tubular body into the container through the other opening of the first tubular body, the gas separating unit including a first filter part which does not pass the powder therethrough but allows the gas to pass therethrough, the second tubular body having a gas exhausting port connected with an external gas suction unit, and the second tubular body having a function of discharging the gas, passing through the first filter part and being attracted to the first tubular body by operation of the external gas suction unit, from the gas exhausting port through the gas delivery path, and

wherein the tubular body has a triple pipe structure including a third tubular body in addition to the first and second tubular bodies, the third tubular body having an inner diameter larger than an outer diameter of the second tubular body, the second tubular body being inserted into the third tubular body so that a gap between the second and third tubular bodies is formed as a second gas delivery path, both ends of the third tubular body being fixed to the second tubular body so as to close the gap between the second and third tubular bodies at both ends thereof, the third tubular body including a second filter part at an outer circumference thereof, the third tubular body having a second gas exhausting port connected with a second external gas suction unit, and the third tubular body having a function of attracting through the second filter part the gas, existing in the powder discharged into the container, by operation of the second gas suction unit, and having a function of discharging the gas, passing through the second delivery path between the second tubular body and the third tubular body, from the second gas exhausting port.

Claim 11 (Canceled).

Claim 12 (Original): The powder filling device of claim 10 wherein the powder filling device works with an electric power obtained from at least one of natural power sources including a sunlight energy and a wind power energy and used as a source of power.

Claims 13-15 (Canceled).

Claim 16 (Original): The powder filling device of claim 10 wherein a lid member which is made of a ventilation porous material and includes a hole for inserting the powder filling nozzle therein is fitted into an opening of the container in a state in which the powder filling nozzle is inserted in the hole of the lid member.

Claim 17 (Original): The powder filling device of claim 10 wherein the powder fluidization unit has an introductory gas control valve which is capable of adjusting a flow velocity of introductory gas, and a delivery powder flow velocity control valve which is capable of adjusting a flow velocity of the powder in the fluidized state within the delivery path.

Claim 18 (Original): The powder filling device of claim 10 wherein the powder fluidization unit has a gas introducing unit for changing the powder into the fluidized state, and the gas introducing unit is a pressure vessel in which the gas is contained in a manner that the gas can be fed to the powder fluidization unit.

Claim 19 (Original): The powder filling device of claim 10 wherein the powder fluidization unit has a gas introducing unit for changing the powder into the fluidized state, and the gas introducing unit is a gas delivery pump with a check valve.

Claim 20 (Original): The powder filling device of claim 10 wherein the powder fluidization unit has a gas introducing unit for changing the powder into the fluidized state, and a gas dispensing unit for introducing the gas into the powder fluidization unit uniformly.

Claim 21 (Original): The powder filling device of claim 10 wherein the powder is a toner for developing an electrostatic latent image.

Claim 22 (Currently Amended): A powder filling method for filling up a container with a powder in a fluidized state by using a powder filling device which includes a hermitically sealed powder fluidization unit and a powder filling nozzle, the powder filling nozzle comprising a tubular body having an opening for discharging the powder in the fluidized state into the container, and a gas separating unit disposed near the opening of the tubular body and allowing a gas delivered together with the powder in the tubular body to pass through the gas separating unit but not allowing the powder to pass through the gas separating unit,

wherein the tubular body has a double pipe structure including a first tubular body and a second tubular body, the first tubular body being inserted into the second tubular body so that a gap between the two tubular bodies is formed as a gas delivery path, both ends of the second tubular body being fixed to the first tubular body so as to close the gap, the first tubular body serving as a delivery path which discharges the powder in the fluidized state fed from one opening of the first tubular body into the container through the other opening of the first tubular body, the gas separating unit including a first filter part which does not pass the

powder therethrough but allows the gas to pass therethrough, the second tubular body having a gas exhausting port connected with an external gas suction unit, and the second tubular body having a function of discharging the gas, passing through the first filter part and being attracted to the first tubular body by operation of the external gas suction unit, from the gas exhausting port through the gas delivery path, and

wherein the tubular body has a triple pipe structure including a third tubular body in addition to the first and second tubular bodies, the third tubular body having an inner diameter larger than an outer diameter of the second tubular body, the second tubular body being inserted into the third tubular body so that a gap between the second and third tubular bodies is formed as a second gas delivery path, both ends of the third tubular body being fixed to the second tubular body so as to close the gap between the second and third tubular bodies at both ends thereof, the third tubular body including a second filter part at an outer circumference thereof, the third tubular body having a second gas exhausting port connected with a second external gas suction unit, and the third tubular body having a function of attracting through the second filter part the gas, existing in the powder discharged into the container, by operation of the second gas suction unit, and having a function of discharging the gas, passing through the second delivery path between the second tubular body and the third tubular body, from the second gas exhausting port the powder filling method comprising the steps of:

mixing the powder contained in the powder fluidization unit with the gas to obtain the powder in the fluidized state;

delivering the powder in the fluidized state from the fluid fluidization unit into the powder filling nozzle via a delivery path so that the powder is discharged into the container from the powder filling nozzle; and

setting the opening of the tubular body in a plugged state by the powder separated from the gas by the gas separating unit so that the delivery of the powder from the tubular body to the container is stopped.

Claim 23 (Original): The powder filling method of claim 22 wherein a bulk density of the powder at a time of delivery is in a range of 0.1 to 0.2.

Claim 24 (Original): The powder filling method of claim 22 wherein a lid member in which the nozzle is inserted and held is fitted in the container, and the powder is discharged through the nozzle into the container.

Claim 25 (Original): The powder filling method of claim 22 wherein the fluidization of the powder into the fluidized state is performed by introducing additional gas into the powder fluidization unit.

Claim 26 (Original): The powder filling method of claim 22 wherein the fluidization of the powder with the gas is performed by vibrating the powder fluidization unit.

Claim 27 (Original): The powder filling method of claim 22 wherein the delivery of the powder from the powder fluidization unit to the nozzle is performed by increasing a pressure within the powder fluidization unit.

Claim 28 (Original): The powder filling method of claim 22 wherein the delivery of the powder from the powder fluidization unit to the nozzle is performed by applying an external pressure to the powder fluidization unit and decreasing an internal volume of the powder fluidization unit.



Claim 29 (Original): The powder filling method of claim 22 wherein the delivery of the powder in the fluidized state by the powder fluidization unit is stopped by operation of a first gas suction unit.

Claim 30 (Original): The powder filling method of claim 22 wherein a bulk density of the powder at a time of stopping is in a range of 0.4 to 0.5.

Claim 31 (Original): The powder filling method of claim 22 wherein an amount of discharge of the powder in the fluidized state is controlled by regulation of a suction pressure by operation of the first gas suction unit.

Claim 32 (Original): The powder filling method of claim 29 wherein a gas suction pressure of the first gas suction unit is in a range of -10kPa to -60kPa.

Claim 33 (Original): The powder filling method of claim 22 wherein an amount of discharge of the powder in the fluidized state is controlled by regulation of opening and closing of an introductory gas control valve or a discharge powder flow velocity control valve of the powder fluidization unit.

Claims 34-35 (Canceled).

Claim 36 (Previously Presented): The powder filling method of claim 22 wherein a gas suction pressure of the second gas suction unit is in a range of -10kPa to -60kPa.

Claim 37 (Currently Amended): The powder filling method of claim ~~[[29]]~~ 24 wherein, when the container is filled up with a given amount of the powder, the delivery of the powder is stopped and the lid member is removed from the container.

Claim 38 (Previously Presented): The powder filling method of claim 22 wherein the powder is a toner for developing an electrostatic latent image.

Claim 39 (Original): A container with which the powder is filled according to the powder filling method of claim 22.